

IN THE CLAIMS:

Please replace claims 1-61 and add new claims 62-76 as follows:

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1. (Amended) A protein or peptide capable of restoring the MHC-II expression in cells from MHC-II deficiency patients in complementation group B and comprising all or part of the amino-acid sequence shown in figure 2.

2. (Amended) The protein or peptide according to claim 1 wherein the cells are BLS 1 cell line, Na cell line or Ba cell line.

3. (Amended) The protein or peptide according to claim 1 wherein the MHC-II is HLA-DR, HLA-DP or HLA-DQ.

4. (Amended) A protein or peptide comprising the amino acid sequence shown in figure 2.

5. (Amended) A protein or peptide which is the homologous protein of a protein or a peptide of claim 1 in another species than human.

6. (Amended) The protein or peptide of claim 5 wherein the species is pig.

7. (Amended) Antibodies capable of specifically recognizing a peptide or protein according to claim 1.
8. (Amended) The antibodies according to claim 7 wherein said antibodies are monoclonal.
9. (Amended) The antibodies according to claim 7 wherein said antibodies are single chain antibodies.
10. (Amended) The antibodies according to claim 7 wherein said antibodies are capable of inhibiting a function or an activity of said protein or a peptide.
11. (Amended) A nucleic acid molecule encoding a protein or a peptide according to claim 1.
12. (Amended) The nucleic acid molecule according to claim 11 comprising all or part of the nucleotide sequence illustrated in figure 2.
13. (Amended) A nucleic acid molecule comprising a sequence complementary to the nucleic acid molecule of claim 11.

14. (Amended) A nucleic acid molecule capable of hybridizing in stringent conditions, with the nucleic acid molecule of claim 11.

~~15.~~ (Amended) A nucleic acid molecule comprising at least one of the sequences illustrated in figures 2.

16. (Amended) The nucleic acid molecule of claim 11 comprising all or part of the DNA molecule encoding the RFXANK gene of a species other than human.

17. (Amended) The nucleic acid molecule of claim 16 wherein the species is pig.

18. (Amended) A nucleic acid molecule comprising a sequence complementary to the nucleic acid molecule of claim 14.

19. (Amended) An anti-sense molecule or ribozyme comprising the nucleic acid molecule of claim 13.

20. (Amended) A vector comprising the nucleic acid molecule of claim 11.

21. (Amended) A process for identifying inhibitors which have the capacity to inhibit a function or an activity of a protein or a peptide according to claim ~~1~~ comprising detecting or measuring of said function or activity after intervention of the potential inhibitor.

22. (Amended) The process according to claim ~~21~~ wherein said function or activity is the expression of MHC class II molecules.

23. (Amended) The process according to claim ~~22~~ wherein the expression of MHC class II molecules is measured at the surface of cells.

24. (Amended) The process according to claim ~~22~~ wherein the expression of MHC class II is measured at the mRNA level or in the cells.

25. (Amended) The process according to claim ~~23~~ wherein said cells are B lymphocyte cell lines with constitutive expression of MHC class II or interferon gamma inducible cell lines.

26. (Amended) The process according to claim ~~21~~ wherein said function or activity is the formation of RFX complex.

27. (Amended) The process according to claim ~~21~~ wherein said function or activity is the binding of the RFX complex to its DNA target.

28. (Amended) The process according to claim ~~27~~ wherein the measure or detection of the function or activity is done by gel retardation assay.

29. (Amended) The process according to claim ~~21~~, wherein said function or activity is the interaction between the RFX complex and at least one of transcription factors X2BP, NF-Y and CIITA.

30. (Amended) The process according to claim ~~21~~ wherein said function or activity is the correction of the MHC II expression defect of cell lines from complementation group B.

31. (Amended) A process for identifying inhibitors which have the capacity to inhibit the synthesis of a protein or a peptide according to claim ~~1~~ comprising detection or measuring a product which contributes to the synthesis of said protein or peptide after intervention of the potential inhibitor.

32. (Amended) The process according to claim ~~31~~ wherein said product is mRNA.

33. (Amended) The process according to claim ~~21~~ comprising a preliminary screening of said potential inhibitors.

34. (Amended) A process of screening which comprises screening for the binding of molecules to the peptide or a protein of claim ~~1~~ or a part thereof.

35. (Amended) The process according to claim ~~34~~ wherein the binding of molecules is detected by ligand-induced change in protein conformation.

36. (Amended) The process according to claim ~~34~~ wherein the binding of molecules is detected by ligand-induced displacement of molecules first identified as binding to a peptide or a protein of capable of restoring the MHC-II expression in cells from MHC-II deficiency patients in complementation group B and comprising all or part of the amino-acid sequence shown in figure 2.

37. (Amended) A process for identifying inhibitors which have the capacity to inhibit a function, an activity or the synthesis of a protein or a peptide capable of restoring the MHC-II expression in cells from MHC-II deficiency patients in complementation group B and comprising all or part of the amino-acid sequence shown in figure 2 comprising the designing of said inhibitors on the basis of the three dimensional structure of a protein or a peptide according to claim ~~1~~.

38. (Amended) The process according to claim 37, wherein the three dimensional structure is obtained using X-Ray structure analysis or spectroscopic methods.

39. (Amended) A process for identifying an inhibitor which has the capacity to inhibit recruitment of CIITA or to inhibit the binding or fixation of CIITA to the MHC-class II enhanceosome, said process comprising the following steps:

a DNA fragment consisting or comprising the W-X-X2-Y box region of the MHC II promoters is contacted with a mixture of cellular proteins comprising proteins binding to the W-X-X2-Y box region and CIITA, and with the substance to be tested;

the thus formed DNA-protein complex is separated from the reaction mixture;

the presence or absence of CIITA in the proteins obtained after step ii) is detected, absence of CIITA indicating that the substance under test has a capacity to inhibit CIITA recruitment.

40. (Amended) The process according to claim 39, wherein the DNA-protein complex is separated by fixation to a solid support able to purify said DNA-protein complex.

41. (Amended) The process according to claim 40, wherein a solid support comprises magnetic beads or a microtitration plate.

42. (Amended) The process according to claim ~~41~~, wherein a DNA fragment consisting or comprising the W-X-X2-Y box region of the MHC II promoters is biotinylated.

43. (Amended) The process according to claim ~~39~~, wherein one or several wash(es) are carried out between step (ii) and step (iii) and/or wherein proteins binding DNA are separated from the DNA carried out between step (ii) and step (iii).

44. (Amended) The process according to claim ~~39~~, wherein the presence of CIITA in the proteins obtained after step iii) is detected by antibodies specific of CIITA.

45. (Amended) The process according to claim ~~39~~, wherein CIITA is chosen among: a recombinant or recombinantly produced, a mutant CIITA, a mutant CIITA which has greater affinity for the MHC-class II enhanceosome than a wild-type CIITA, a truncated version of a wild-type CIITA.

46. (Amended) The process according to claim ~~39~~, wherein CIITA is tagged or wherein CIITA comprises a Fluorescent Protein or an epitope.

47. (Amended) The process according to claim ~~39~~, wherein the substances to be tested are CIITA dominant negative mutants.

48. (Amended) The process according to claim ~~39~~, wherein the mixture of cellular proteins and CIITA comprises a nuclear extract of CIITA + cells.

49. (Amended) The process according to claim ~~39~~ further comprising a step of separating the proteins bound to the DNA from the DNA and optionally detecting the presence or absence of any of the proteins capable of binding to the W-X-X2-Y region of the MHC-class II promoters, the absence of any of these proteins indicating that the substance under test is capable of inhibiting the binding of said protein to DNA.

50. (Amended) An inhibitor identifiable by a process according to claim ~~21~~.

51. (Amended) The inhibitor according to claim ~~50~~ which is an antibody capable of specifically recognizing a protein or peptide capable of restoring the MHC-II expression in cells from MHC-II deficiency patients in complementation group B and comprising all or part of the amino-acid sequence shown in figure 2.

52. (Amended) The inhibitor according to claim ~~50~~ which is an antibody, a single chain antibody, a dominant negative mutant, a protein, a peptide, a small molecular weight molecule, a ribozyme or an anti-sense molecule.

53. (Amended) Inhibitors of a protein or a peptide according to claim ~~1~~.

54. (Amended) A nucleic acid molecule encoding an inhibitor of claim ~~50~~.
55. (Amended) A method of using the inhibitor according to claim ~~50~~ in therapy comprising administering said inhibitor to a patient in need of said therapy.
56. (Amended) A pharmaceutical composition comprising an inhibitor according to claim ~~50~~ in association with a pharmaceutically acceptable vehicle.
57. (Amended) A method of using an inhibitor according to claim ~~50~~ for the preparation of a medicament for use in therapy or prevention of diseases associated with aberrant expression of MHC class II genes.
58. (Amended) A method of using an inhibitor according to claim ~~50~~ as an immunosuppressive agent comprising administering said inhibitor to a patient in need of said immunosuppressive agent.
- ~~59~~. (Amended) A protein complex comprising cellular proteins capable of binding to the W-X-X2-Y box of MHC-class II promoters and CIITA.
60. (Amended) The complex according to claim ~~59~~ wherein CIITA is : a recombinant or recombinantly produced CIITA, a mutant CIITA, a mutant CIITA which

has greater affinity for the MHC-class II enhanceosome than a wild-type CIITA or a truncated version of a wild-type CIITA.

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61. (Amended) Antibodies capable of specifically recognizing a protein complex according to claim ~~59~~.

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~~62~~. (New) A protein or peptide comprising an amino acid sequence having at least 80% identity or similarity with the amino acid sequence shown in figure 2.

63. (New) The protein or peptide of claim ~~62~~ wherein said amino acid sequence has at least 90% identity or similarity with the amino acid sequence shown in figure 2.

~~64~~. (New) A protein or peptide comprising a functional part of the amino acid sequence shown in figure 2.

~~65~~. (New) A protein or peptide comprising a functional part of an amino acid sequence having at least 80% homology with the amino acid sequence shown in figure 2.

66. (New) The protein or peptide of claim ~~65~~ wherein said amino acid sequence has at least 90% homology with the amino acid sequence shown in figure 2.

~~67.~~ (New) A nucleic acid molecule comprising a sequence exhibiting at least 90% identity or similarity with any of the sequences illustrated in figure 2.

~~68.~~ (New) A nucleic acid molecule comprising a functional part of any of the sequences illustrated in figure 2.

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69. (New) A process for identifying inhibitors which have the capacity to inhibit a function or an activity of a nucleic acid molecule according to claim ~~11~~ comprising detecting or measuring of said function or activity after intervention of the potential inhibitor.

70. (New) A process for identifying inhibitors which have the capacity to inhibit the synthesis of a nucleic acid molecule according to claim ~~11~~ comprising detection or measuring a product which contributes to the synthesis of said protein or peptide after intervention of the potential inhibitor.

71. (New) The process according to claim ~~69~~ comprising a preliminary screening of said potential inhibitors.

72. (New) The process according to claim ~~31~~ comprising a preliminary screening of said potential inhibitors.

73. (New) The process according to claim ~~70~~ comprising a preliminary screening of said potential inhibitors.

74. (New) A process of screening which comprises screening for the binding of molecules to the nucleic acid molecule of claim ~~17~~ or a part thereof.

75. (New) A process for identifying inhibitors which have the capacity to inhibit a function, an activity or the synthesis of a nucleic acid molecule encoding a protein or a peptide capable of restoring the MHC-II expression in cells from MHC-II deficiency patients in complementation group B and comprising all or part of the amino-acid sequence shown in figure 2 comprising the designing of said inhibitors on the basis of the three-dimensional structure of a protein or peptide according to claim ~~17~~.

76. (New) Inhibitors of a nucleic acid molecule according to claim ~~17~~.